



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20531
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,766	11/27/2001	Takahiro Tochioka	740819-705	7593

22204 7590 02/20/2003

NIXON PEABODY, LLP
8180 GREENSBORO DRIVE
SUITE 800
MCLEAN, VA 22102

EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

12

DATE MAILED: 02/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993.766

Applicant(s)

TOCHIOKA ET AL

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 12 2 02.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino (U.S. 5,514,745) in view of Mitsuno et al. (U.S. 5,409,991).

The disclosure is adequately set forth in paragraph 7 of the office action mailed 5/24/02. Paper No. 7, and is incorporated here by reference.

4. Claims 1, 3-7, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobajima et al. (U.S. 5,484,835) in view of Mitsuno et al. (U.S. 5,409,991) and Yoshino (U.S. 5,514,745).

The disclosure is adequately set forth in paragraph 8 of the office action mailed 5/24/02. Paper No. 7, and is incorporated here by reference.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimitsu et al. (U.S. 5,792,527) in view of Mitsuno et al. (U.S. 5,409,991) and Yoshino (U.S. 5,514,745).

The disclosure is adequately set forth in paragraph 9 of the office action mailed 5 24 02, Paper No. 7, and is incorporated here by reference.

Response to Arguments

6. Applicants arguments with respect to Yoshimitsu et al. (U.S. 5,792,527) and WO 98/16359 have been considered but they are moot in view of the discontinuation of these references against present claims 1-7 and 11-12.

The references have been withdrawn in light of the comparative data as set forth on pages 39-52 and Figure 8 of the present specification.

Yoshimitsu et al. disclose long glass fiber filled material comprising polypropylene matrix resin with melt flow rate (MFR) measured according to JIS K2710 at 230 °C and 2.16 kg of greater than 10 g/10 min, preferably 30-100 g/10 min while WO 98/16359 discloses glass fiber filler reinforced resin material for injection molding which comprises polypropylene which has melt flow rate (MFR) of 5-500 g/10 min.

The comparative data in the present specification compares material within the scope of the present claims, i.e. comprising polypropylene with MFR within the scope of the present claims (see examples 1-2 and 7-10), with material outside the scope of the present claims, i.e. comprising polypropylene with MFR outside of the scope of the present claims but within the scope of either Yoshimitsu et al. (see examples 5-6) or WO 98/16359 (see examples 5-6 and 11). It is shown that the present invention is superior in terms of weight average fiber length and Izod impact value (with respect to example 5 and 6) and bending modulus and/or Izod impact value (with respect to example 11).

Thus, the data is successful in establishing unexpected or surprising results over the cited prior art.

It is noted that Yoshimitsu et al. is still utilized as a reference against present claim 10 given that this claim only requires that the MFR of the polypropylene is at least twice that of the diluent polymer. Given that Yoshimitsu et al. disclose polypropylene with MFR of 30-100 g/10 min and that Yoshino, which is used in combination with Yoshimitsu et al. to teach diluent polymer, disclose MFR of diluent polymer of 3-20 g/10 min, it is clear that the combination of Yoshimitsu et al. and Yoshino et al. meet the requirements of present claim 10.

7. Applicants' arguments filed 12/02/02 have been fully considered but with respect to Yoshino, Mitsuno et al., Sobajima et al., and Yoshimitsu et al. (with respect to present claim 10), they are not persuasive.

Specifically, applicants argue that the combination of Yoshino and Mitsuno et al. does not disclose or suggest polypropylene with pentad isotactic index and melt flow rate as presently claimed wherein such values are defined in order to produce injection molded article with bending modulus of at least 5 GPas and Izod impact value of at least 25 KJ/m². Applicants argue that the combination of Yoshino with Mitsuno et al. fails to achieve that which is presently set forth in the claimed invention.

It is noted that Yoshino discloses long glass fiber filled reinforced material for injection molding which is identical to that presently claimed, including polypropylene matrix resin with melt flow rate which falls squarely within the range presently claimed (see for instance col.9, line 10), with the exception that there is no disclosure in Yoshino of the pentad isotactic index of

polypropylene matrix and propylene component of the ethylene-propylene block copolymer present in the material.

This is why Yoshino is used in combination with Mitsuno et al., which is drawn to thermoplastic propylene resin comprising glass fibers and which discloses using propylene homopolymer and propylene component of the block copolymer which possess pentad isotactic index of 97% or greater in order to produce composition with high heat resistance, stiffness, and scratch resistance.

Thus, it is the examiner's position that the combination of Yoshino with Mitsuno et al. does disclose long glass fiber filled reinforced material as presently claimed.

With respect to the bending modulus and Izod impact value, while applicants argue that the combination of Yoshino with Mitsuno et al. do not disclose or suggest such features, firstly, it is significant to note that there is no requirement in the present claims regarding bending modulus and Izod impact value, and thus, it is not necessary for the prior art to meet such limitations. The present claims are not drawn to an injection-molded article but rather to long glass fiber filled reinforced material, which as described above, is disclosed by Yoshino in view of Mitsuno et al. Secondly, even if such limitations regarding the bending modulus and Izod impact value were present in the instant claims, given that the combination of Yoshino with Mitsuno et al. discloses long glass fiber filled reinforced material identical to that presently claimed, it is clear that such material would intrinsically possess bending modulus and Izod impact values as presently claimed.

With respect to present claim 10, applicants argue that each pentad isotactic index in the propylene content of the masterbatch and that of the diluent polymer and melt flow rate

therebetween are defined so as to produce injection molded article which has bending modulus of at least 5 GPas and Izod impact value of at least 25 KJ m².

It is noted that Yoshino disclose masterbatch identical to that presently claimed, including melt flow rate of polypropylene which is twice as large as that of the diluent polymer, with the exception that there is no disclosure in Yoshino of the pentad isotactic index of polypropylene matrix and propylene component of the ethylene-propylene block copolymer present in the material.

This is why Yoshino is used in combination with Mitsuno et al., which is drawn to thermoplastic propylene resin comprising glass fibers and which discloses using propylene homopolymer and propylene component of the block copolymer which possess pentad isotactic index of 97% or greater in order to produce composition with high heat resistance, stiffness, and scratch resistance.

Thus, it is the examiner's position that the combination of Yoshino with Mitsuno et al. does disclose long glass fiber filled reinforced material as presently claimed.

With respect to the bending modulus and Izod impact value, while applicants argue that the combination of Yoshino with Mitsuno et al. do not disclose or suggest such features, firstly, it is significant to note that there is no requirement in the present claim 10 regarding bending modulus and Izod impact value, and thus, it is not necessary for the prior art to meet such limitations. The present claims are not drawn to an injection-molded article but rather to long glass fiber filled reinforced material which, as described above, is disclosed by Yoshino in view of Mitsuno et al. Secondly, even if such limitations regarding the bending modulus and Izod impact value were present in the instant claims, given that the combination of Yoshino with

Mitsuno et al. discloses long glass fiber filled reinforced material identical to that presently claimed. it is clear that such material would intrinsically possess bending modulus and Izod impact values as presently claimed.

With respect to Sobajima et al. in view of Yoshino and Mitsuno et al. and Yoshimitsu et al. in view of Yoshino and Mitsuno et al., applicants make the same arguments as set forth with respect to the combination of Yoshino with Mitsuno et al. Namely, that neither combination of references disclosed or remotely suggested that which is presently set forth by applicants' claimed invention. That is, none of the references teach value range of pentad isotactic index in polypropylene components and melt flow rate of matrix polymer so as to produce an unconventional high performance injection molded article.

Similar to the response set forth by the examiner above with respect to Yoshino in view of Mitsuno et al., it is noted that while Sobajima et al. disclose melt flow rate which falls squarely within the range presently claimed (see for instance col.8, lines 43-44) and Yoshimitsu et al. in combination with Yoshino disclose MFR of polypropylene which is at least twice that of the diluent polymer as required in present claim 10, there is no disclosure of pentad isotactic fraction as presently claimed. This is why either Sobajima et al. or Yoshimitsu et al. is used in combination with Mitsuno et al. which is drawn to thermoplastic propylene resin comprising glass fibers and which discloses using propylene homopolymer and propylene component of the block copolymer which possess pentad isotactic index of 97% or greater in order to produce composition with high heat resistance, stiffness, and scratch resistance.

Given that the combination of references discloses long glass fiber filled reinforced material for molding identical to that presently claimed, it is clear that such material would intrinsically produce "unconventional high performance injection molded article" as described by applicants' on page 6 of the amendment.

As stated above, while Yoshino, Sobajima et al., and Yoshimitsu et al. each disclose long glass fiber filled material with melt flow rate as presently claimed, there is no disclosure in any of the references of pentad isotactic index as presently claimed. It is noted that pages 39-40 and Figure 8 of the present specification sets forth comparative data wherein material within the scope of the present claims, i.e. comprising polypropylene with pentad isotactic index as presently claimed (see examples 1-2 and 7-9), is compared with material outside the scope of the present claims, i.e. comprising polypropylene with pentad isotactic index outside the scope of the present claims (see examples 3-4 and 14-17). It is shown that the material of the present invention is superior in terms of weight average fiber length and bending modulus and/or Izod impact value.

However, the data is not successful in establishing unexpected or surprising results over the cited prior art given that Mitsuno et al. already teach the criticality of using polypropylene with pentad isotactic index of greater than 95% as required in the present claims.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1714

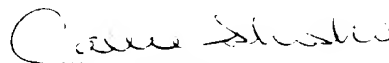
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

CS
February 15, 2003


Callie E. Shosho
Examiner
Art Unit 1714